FOR INDOOR USE ONLY

OWNERS AND SERVICE MANUAL

INNOVATIVE CONCEPTS IN ENTERTAINMENT INC.

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FOREWORD

This Manual has been compiled to assist those whose task it is to set-up, operate and maintain the **THRILL RIDER™.** It is essential that all operating and maintenance staff responsible for the safe operation of the simulator completely understand and comply with information herein.

Further advice and field support is available from:

I.C.E. SERVICE DEPARTMENT
716-759-0360
NORMAL BUSINESS HOURS ARE:
MONDAY – FRIDAY, 8:00 AM TO 5:00 PM

Warnings:

Operation of the **THRILL RIDER™** without the proper electrical requirements will void the warranty.

OPERATION OF THIS EQUIPMENT IN A MANNER NOT SPECIFIED BY THE MANUFACTURER MAY RESULT IN THE PROTECTION DEVICES NOT AFFORDING THE LEVEL OF SAFETY NORMALLY PROVIDED.

ONLY TRAINED PERSONNEL ARE ALLOWED TO MAINTAIN THE SYSTEM.

THE THRILL RIDER™ IS A DYNAMIC MOTION SIMULATOR RIDE. ANYONE WHO IS PREGNANT OR THINK THEY MAY BE, ARE SUBJECT TO MOTION SICKNESS, HAVE BACK OR NECK PROBLEMS, OR UNDER THE INFLUENCE OF ALCOHOL OR DRUGS, HAVE EPILEPSY, HAS A HEART COMPLAINT, OR OTHER MEDICAL CONDITION, OR IS OF A NERVOUS DISPOSITION, SHOULD USE CAUTION WHEN USING THIS RIDE.

SMALL CHILDREN SHOULD BE SUPERVISED BY AN ADULT.

NOTICE

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SET-UP AND ASSEMBLY

INTRODUCTION

Thank you for purchasing the **THRILL RIDER**ä coaster ride from I.C.E. We have tried to make assembly of the **THRILL RIDER**ä as easy as possible. Please follow the directions given below to be sure the coaster is assembled properly and safely.

WARNING: DO NOT TRY TO DEFEAT THE SAFETY SENSOR SYSTEM WITHIN THE FENCE AREA. THIS IS NEEDED TO ENSURE THE SAFETY OF THE CUSTOMER.

LOCATION PREPARATION

Be sure you have the space for the coaster ready before you unpackage the coaster .

Make sure there is an available 120 VAC outlet within 10 feet of the fence assembly.

You will need at least 10 amps of available current for the coaster, but 15 amps of available current would be better.

Make sure you choose a spot with a relatively level surface. The flatter the better.

UNPACKING

Carefully unpack the crating from around the coaster and remove from the skid.

Remove the fence sections, podium and related parts from their packages. Look for any loose hardware.

INSTALLATION

FENCE INSTALLATION

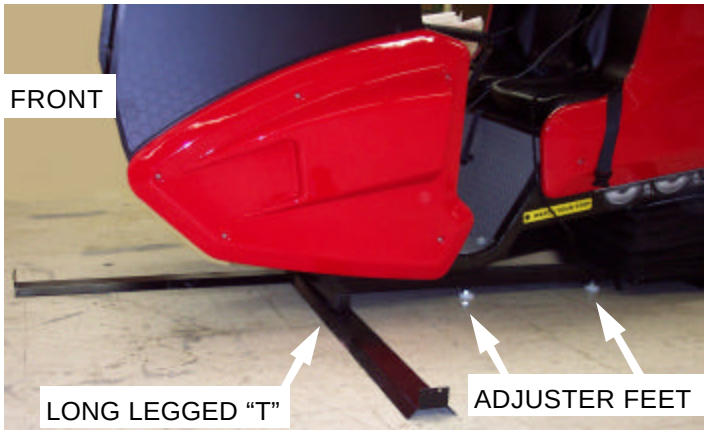
1. Place the coaster into its permanent position.

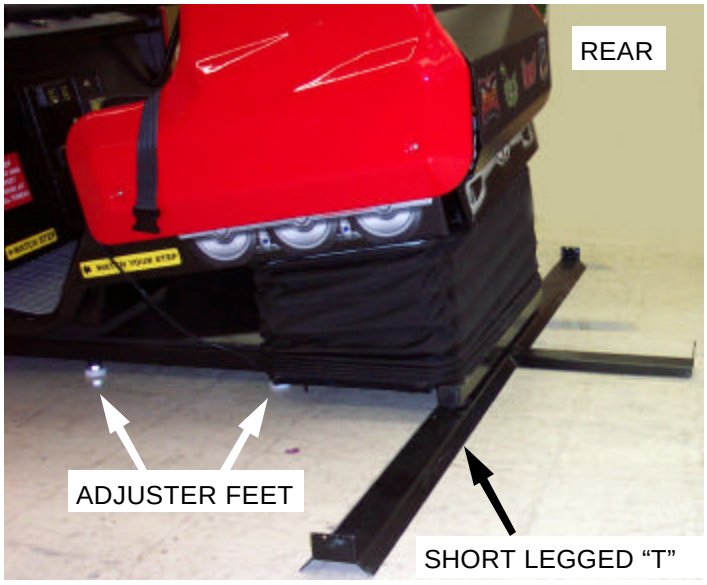
POSITIONING TIPS:

a) Make sure the coaster is at least 36 inches from any walls or pillars so there is room for the fence.

b) Position the right hand side of the coaster where you want customers to enter and exit. This is necessary since the podium and turnstile line up with the right hand side of the game. See illustration for further explanation.

2. Place the fence supports under the coaster feet. The support with the longer legged "T" goes under the front of the coaster, where the shorter legged "T" goes under the rear of the coaster.





SET-UP AND ASSEMBLY

The easiest way to put the "T" fence supports under the coaster is to tilt the coaster up from the side and slide the "t" supports under the adjuster feet of the coaster.

NOTE: THERE ARE LOCATING HOLES IN THE "T" SUPPORTS THAT THE ADJUSTER FEET ON THE COASTER BASE FIT INTO.

Do one side of the coaster, then tilt the other side of the coaster up and align the other side of the "T" supports with the adjuster feet.

3. Check that the coaster sits firmly and evenly on the floor. Rock the coaster back and forth to be sure the base of the coaster does not rock. If the base rocks back and forth on the floor, tilt the coaster up and screw or unscrew the adjuster feet until the base of the coaster is steady.

4. Center the coaster. The coaster will be very difficult to move once the fence sections are installed, so now is a good time to make sure that the coaster will sit evenly to any walls or posts in the vicinity.

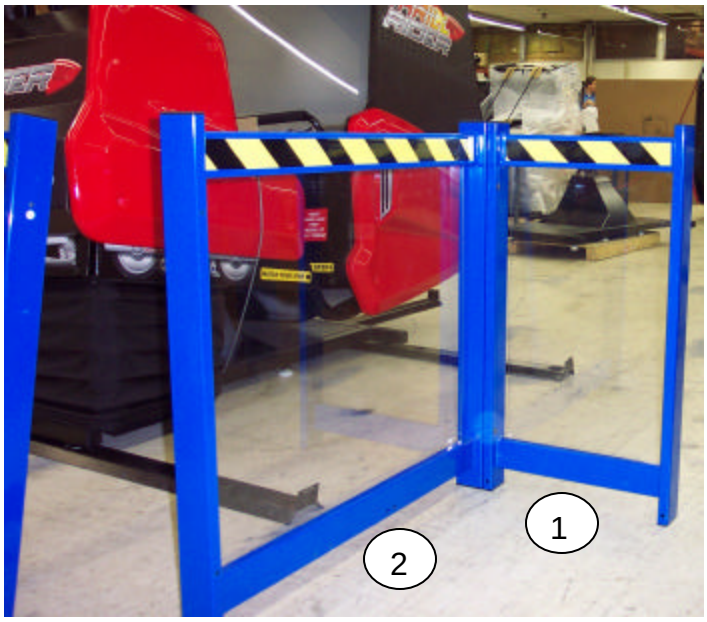
5. It is now time to install the fence sections of the coaster together and to the fence "T" supports.

NOTE: ALL FASTENING HARDWARE HAS BEEN PRE-ATTACHED TO THE FENCE SECTIONS TO MAKE IT EASY TO DETERMINE WHERE THE PROPER HARDWARE GOES.

ASSEMBLE ALL SECTIONS LOOSELY, THEN GO BACK AND TIGHTEN ALL BOLTS ONCE THE ENTIRE UNIT HAS BEEN ASSEMBLED.

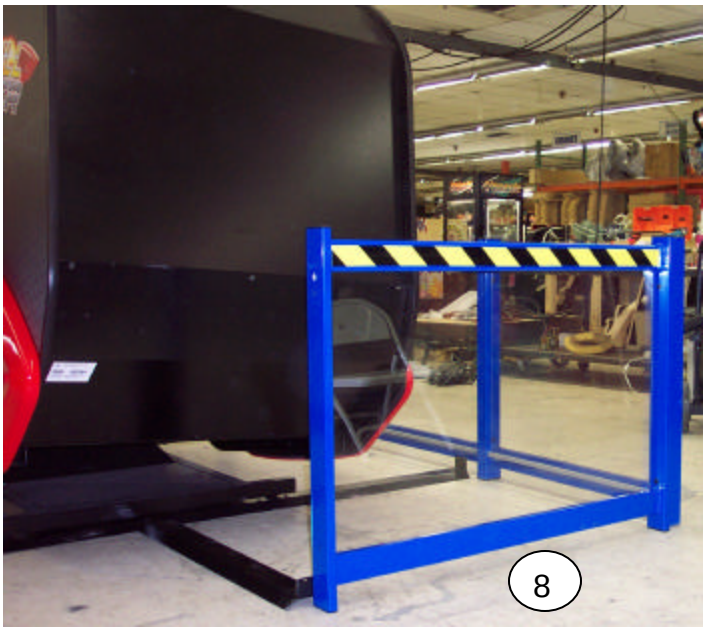
6. Fence sections are marked with numbers that match where the sections join together. Working in a clockwise fashion join the sections together starting at #1. (See illustration).

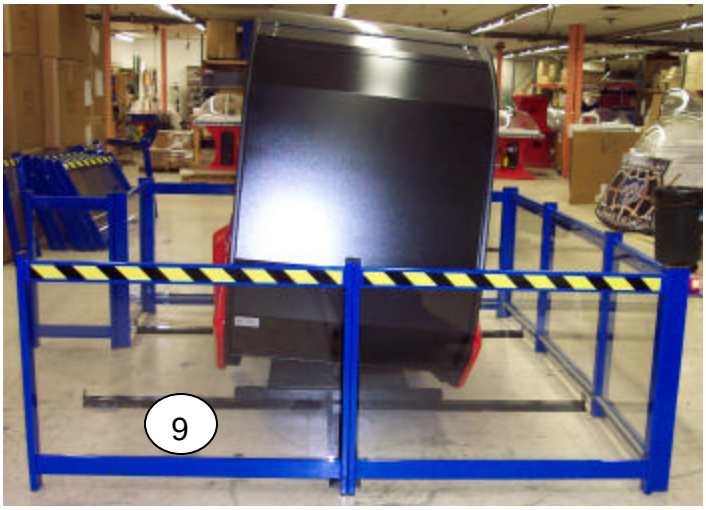
7. Continue to join the fence sections together until all of the fence is completed.

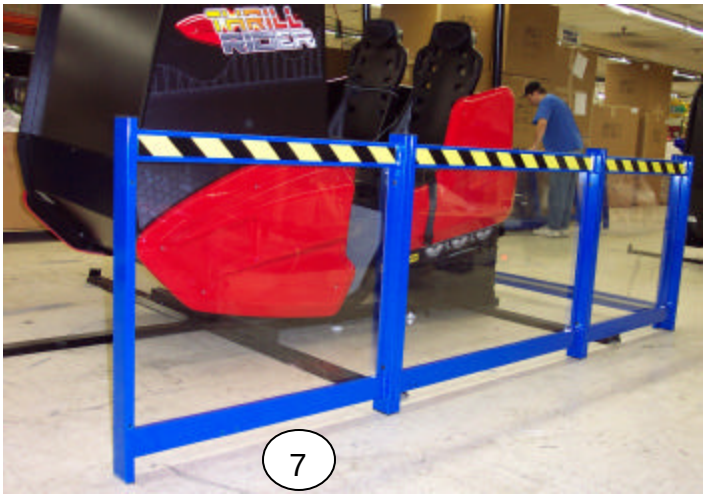


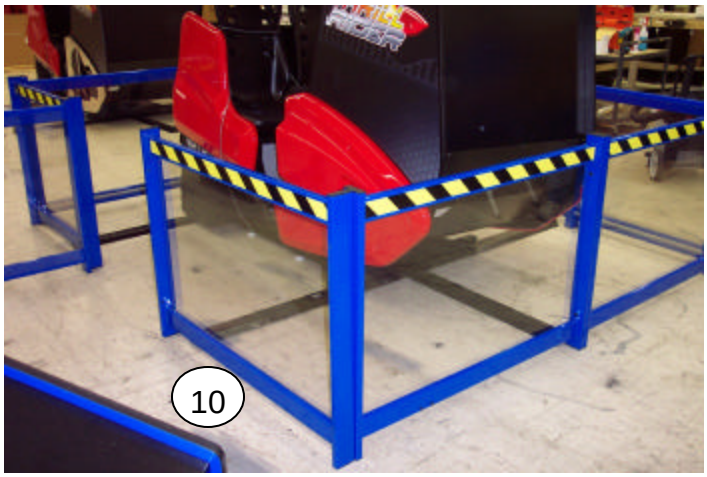
SEE PAGE 9 FOR FULL LAYOUT OF FENCE SECTION POSITIONS.

SET-UP AND ASSEMBLY





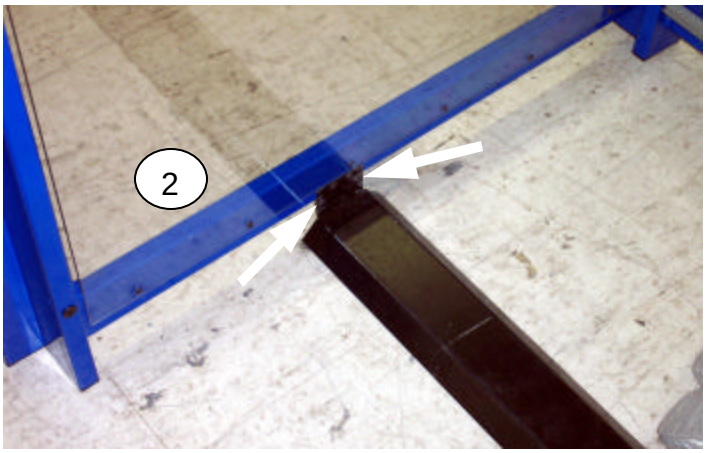


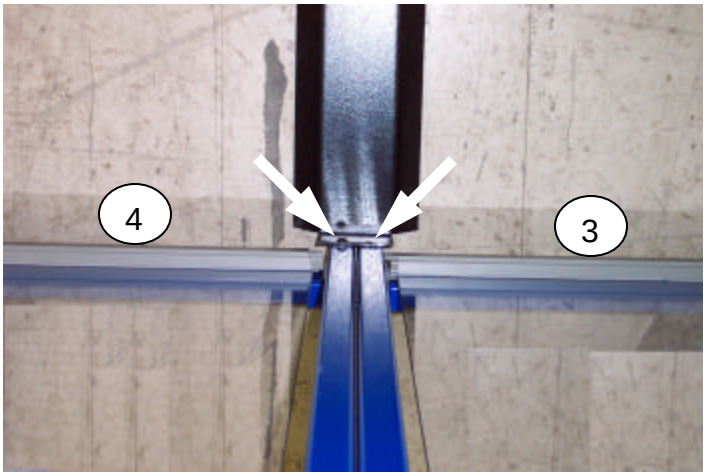


SET-UP AND ASSEMBLY

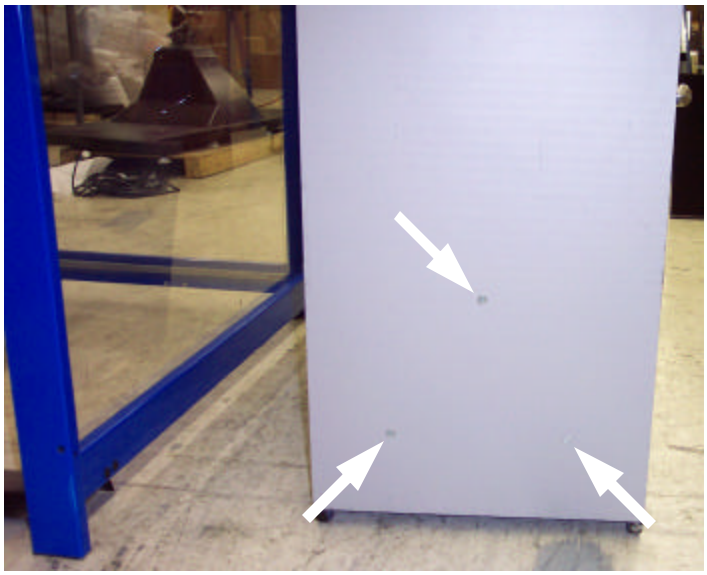
8. Attach the bolts from the fence sections to the fence "T" supports.

9. Square up all of the fence sections and tighten all of the hardware securely.





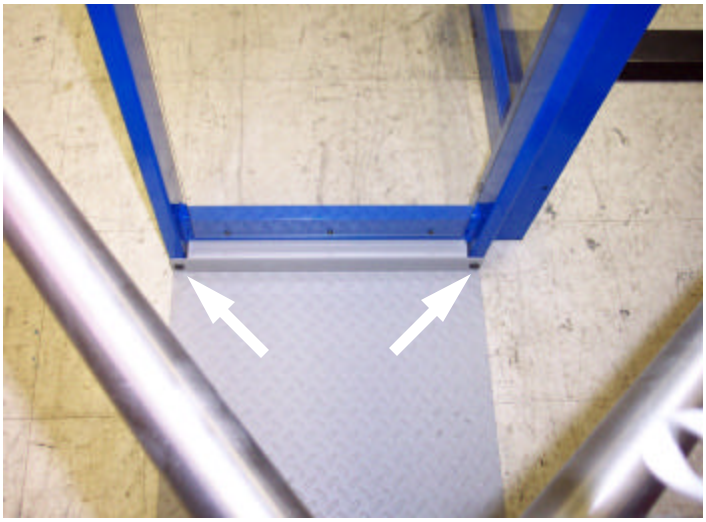
10. Flip the podium / Turnstile assembly up on its end and attach the Diamond Plate panel to the bottom using the supplied Flat head screws.



11. Attach the Podium / Turnstile assembly to the fence unit.

SET-UP AND ASSEMBLY

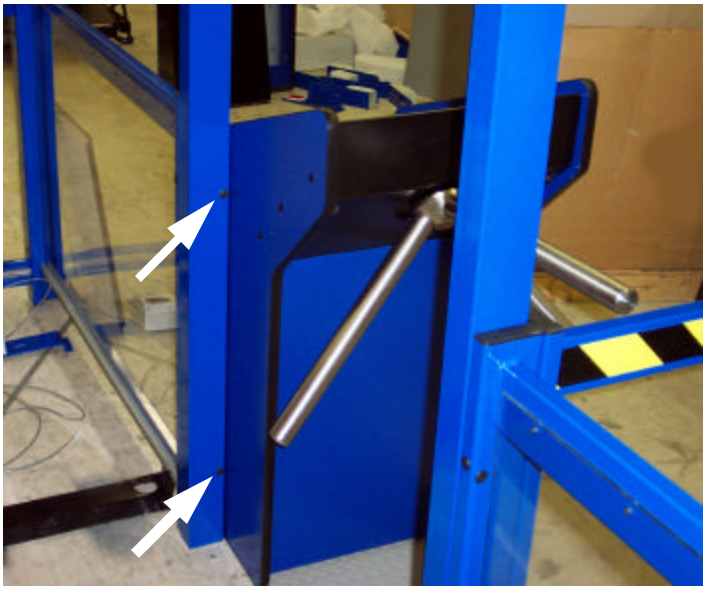
12. Attach the diamond plate panel to the short fence section using the supplied hardware.



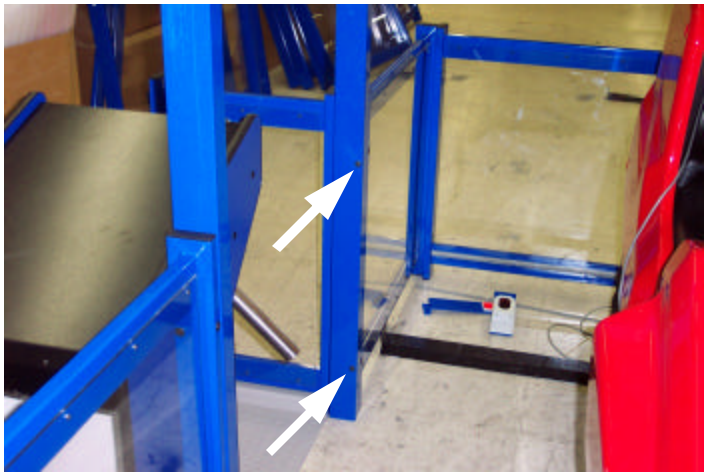
13. Tighten the diamond plate and Podium / Turnstile hardware securely.

14. Run the Marquee power cord thru the mounting pole with the 3 pin connector running thru the slot in the pole.

15. Attach the pole to the Podium / Turnstile assembly while feeding the Marquee power cord thru the power cord hole.

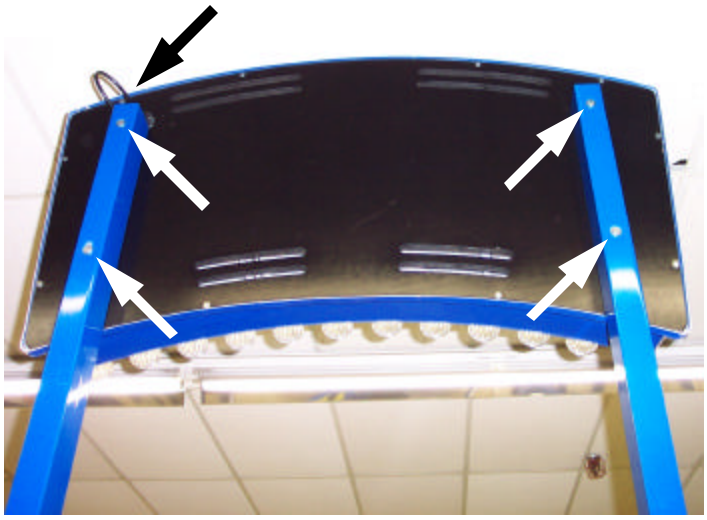


16. Attach the other pole to the fence as shown.

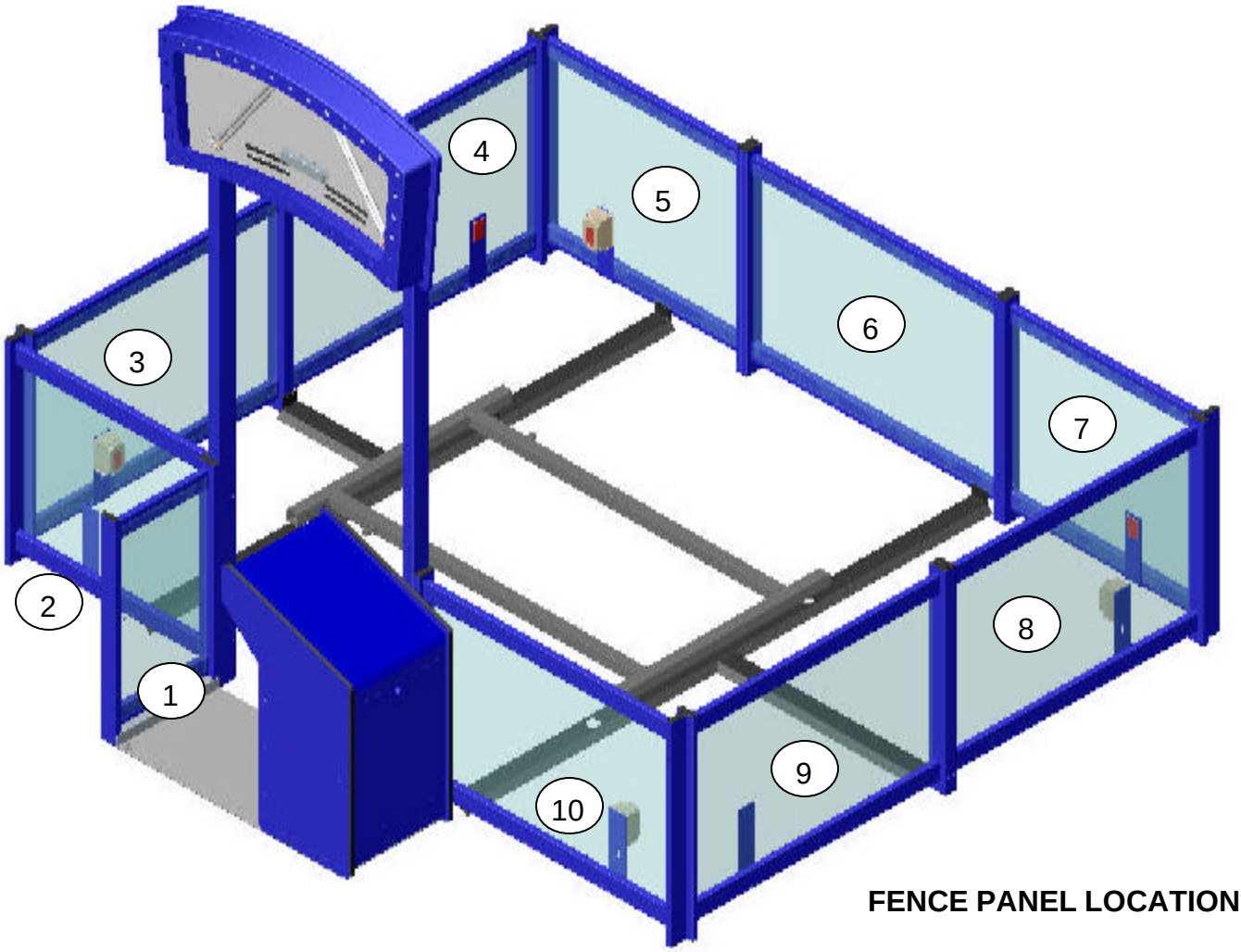


17. Bolt the Marquee to the top of the attachment poles using the hardware supplied.

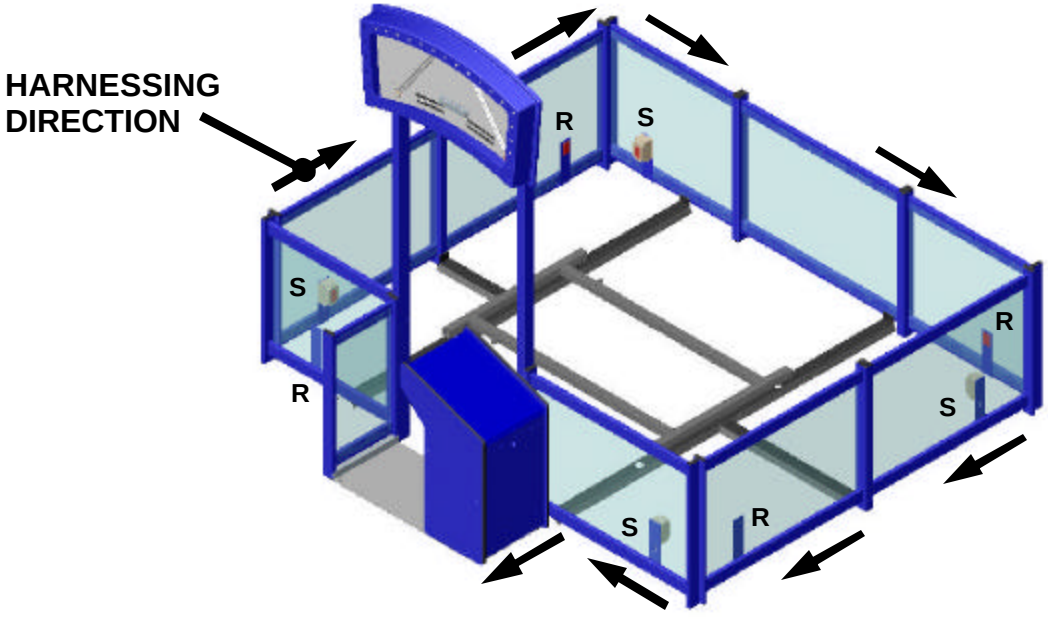
18. Plug the power cord into the marquee and make sure that the power switch on the back of the marquee is turned on.



SET-UP AND ASSEMBLY



FENCE PANEL LOCATIONS



REFLECTOR &
SENSOR LOCATIONS

SET-UP AND ASSEMBLY

SAFETY SENSOR INSTALLATION

OVERVIEW - There are 4 safety sensors that protect the inside fence area of the coaster. These are reflective optical sensors. These sensors work by sending out a beam of infra-red light, bouncing it off a reflector and back to a receiver on the same sensor. When the beam is broken, a signal change is sent to the computer on the coaster and the coaster motion is stopped. This prevents customers from being injured during the ride. Each time the beam is broken, motion for the game is stopped for a period of 5 seconds.

NOTE: FOR THE SENSORS AND COASTER TO FUNCTION PROPERLY, IT IS NECESSARY FOR THE SENSORS TO BE ALIGNED PROPERLY. **IF THE SENSORS ARE MIS-ALIGNED, THE COASTER WILL NOT MOVE.**

1. Install the reflectors and sensors onto the fence in the positions indicated. (See Diagram on Page #9) There are numbers on the fence, reflectors and sensors indicating the proper location for each. Make sure everything is as straight as possible and fasten securely. See Fig. #1

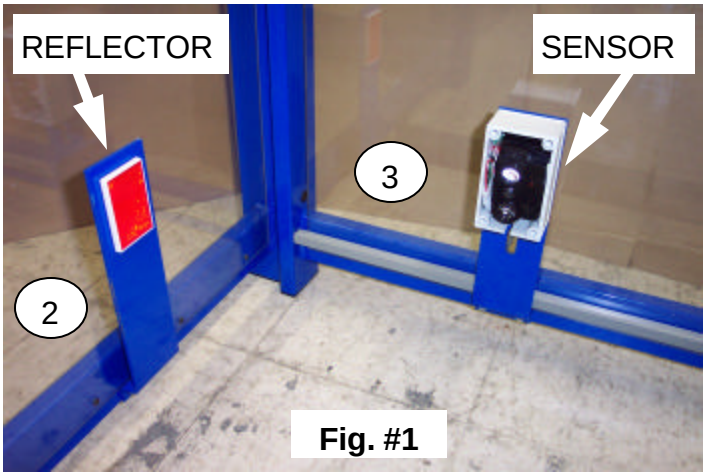


Fig. #1

2. Remove the covers from the sensors and set next to each sensor.

3. Remove the snap on plastic covers for the wire molding and place by each fence section. See Fig. #2

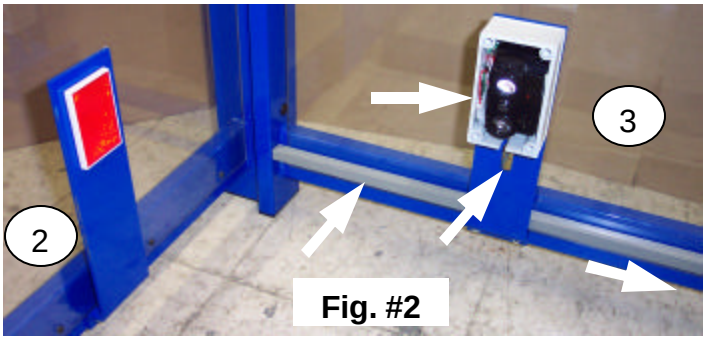


Fig. #2

4.There are 4 long wires, 1 for each of the sensors. The longest wire goes to the sensor marked #2. This is the sensor located to your left as you walk into the fenced in area. See Fig. #2

5. Starting at this sensor, insert the connector thru the slot in the sensor bracket as indicated. Connect the long wire to the sensor. Tuck the connector up into the sensor housing as shown. See Fig. #2

6. Run the long wire into the wire molding and snap the cover over the molding. Run the wire thru the next section of wire molding and snap the cover on. See Fig. #3

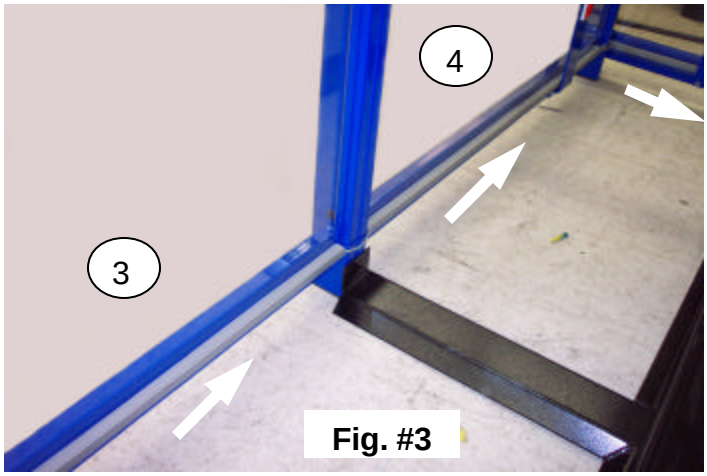
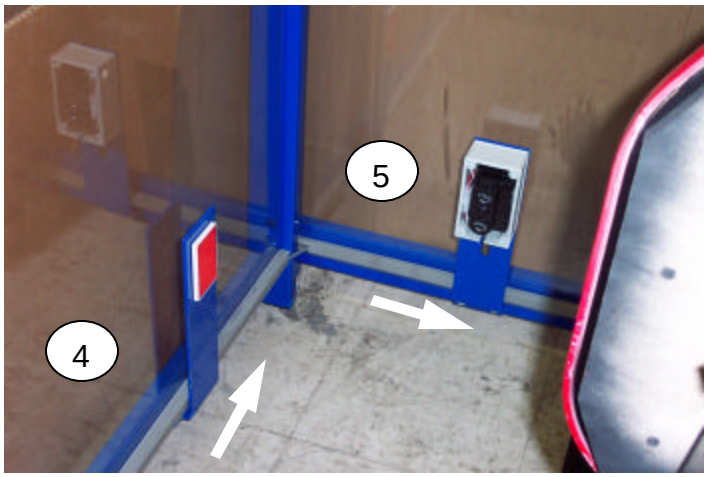


Fig. #3

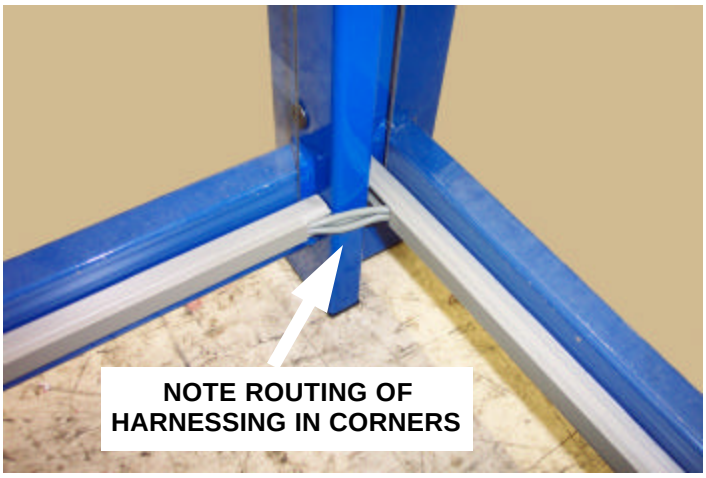
7. Connect the next sensor (Marked #4) in the same manor as above using the next longest wire.

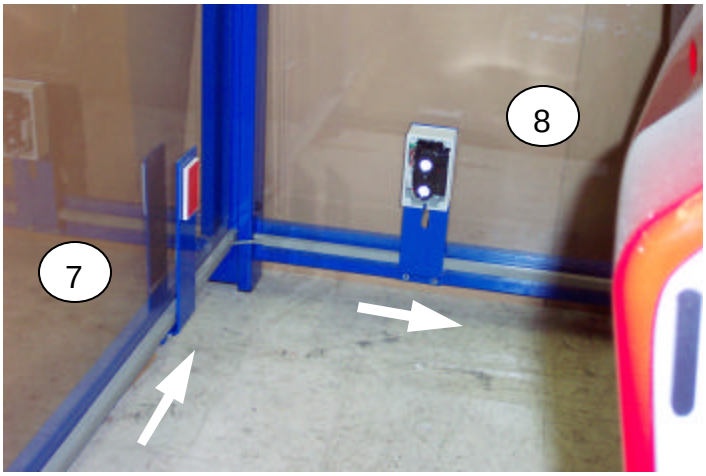
8. Now run the 2 wires into the wire molding and snap the cover on.

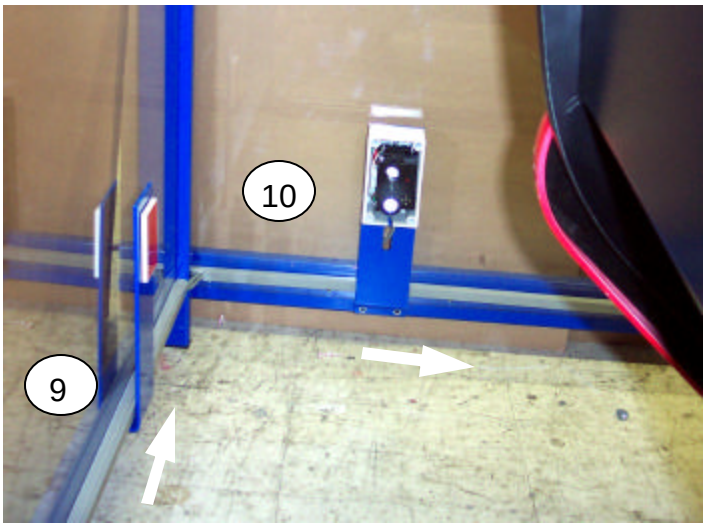


9. Continue in this fashion with the rest of the sensor wiring.

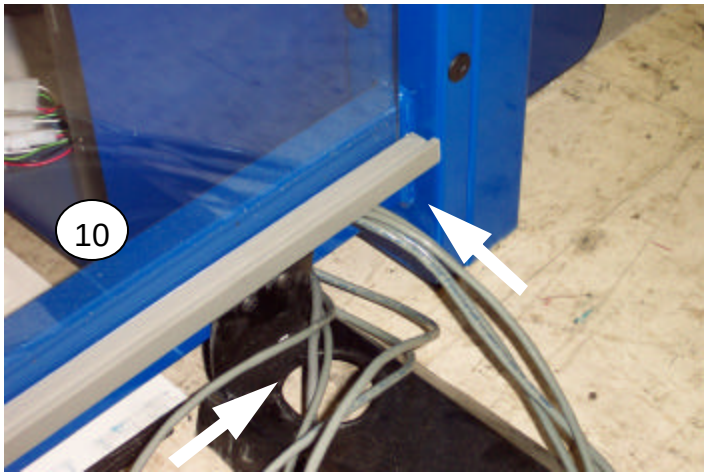
SET-UP AND ASSEMBLY

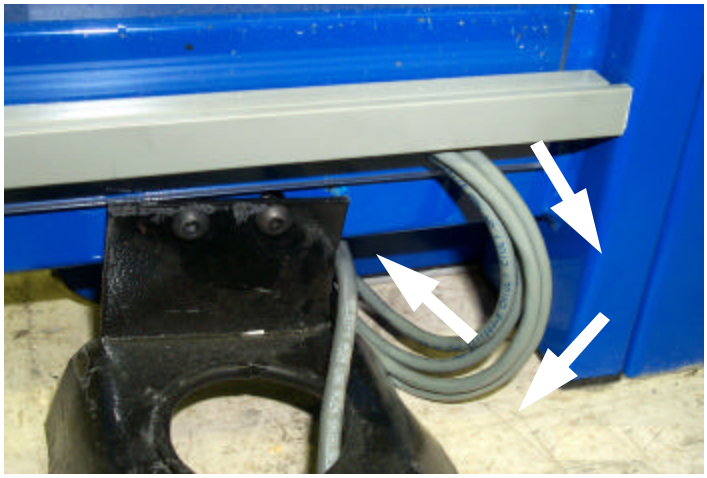




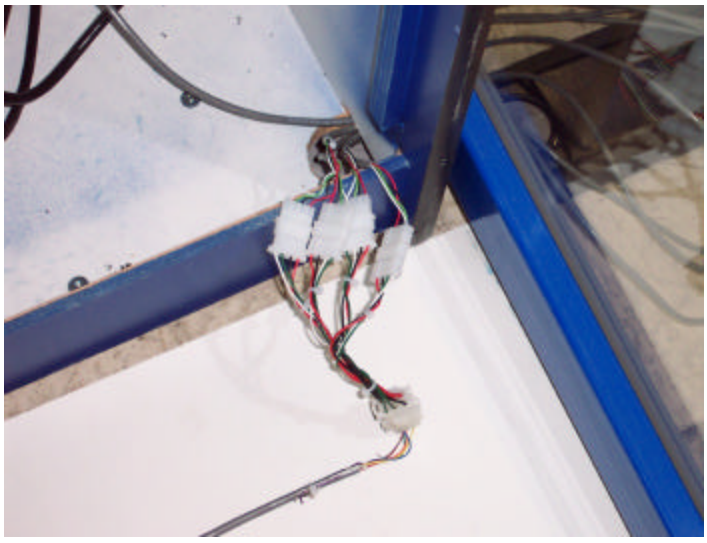


10. Once all of the wiring has been run, insert all of the sensor wiring into the podium thru the access hole in the bottom.





11. Connect all 4 sensor wires to the daisy chain adapter harness inside the podium / turnstile assembly.



NOTE: COVERS SHOULD BE LEFT OFF THE SENSORS UNTIL THEY ARE ADJUSTED AFTER THE INITIAL POWER UP.

SET-UP AND ASSEMBLY

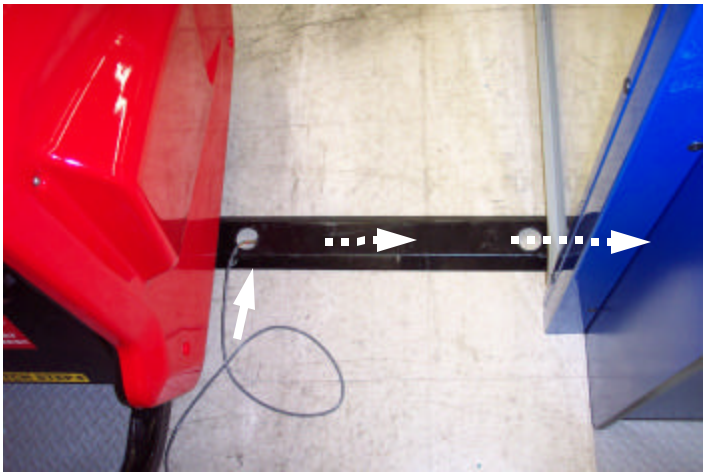
FINAL WIRING

At this point the final wiring needs to be run from the coaster and Podium / Turnstile to the A.C. Outlet.

We have specifically kept the coaster and Marquee wired separately as this will allow the marquee to be plugged into a separate circuit if necessary.

1. Run the gray sensor wire from the coaster to the Podium / Turnstile assembly. Do this by running the sensor wire into the hole on the front fence "T" support by the front right leg leveler, as per the illustration.

2. Push the sensor wire out of the end of the “T” support and run wire into the bottom of the Turnstile.



3. Insert the sensor wire into the access hole in the podium / Turnstile assembly and connect to the sensor daisy chain harness.

4. There is a 20 ft. power cord for the Marquee that is supplied with the coaster. Run the end with the 3 pin connector into the hole on the front fence "T" support by the front right leg leveler, as per the illustration.

5. Bring the marquee power cord back out of the hole that is located by the podium / Turnstile assembly as per the illustration.

6. Insert the marquee power cord into the access hole in the podium / Turnstile assembly and connect to the marquee power cord that runs down thru the marquee pipe.

7. RUNNING A.C. WIRING - wrap a piece of supplied spiral wrap around the wiring where it comes out of the hole by the adjuster foot. This will make for a neater appearance.

8. Determine where the coaster will be plugged in and run the power for the Marquee and coaster to the A.C. Receptacle.

CAUTION: USE ONLY A 110-120 VOLT V.A.C. GROUNDED OUTLET FOR THIS PRODUCT.

FAILURE TO USE A PROPERLY GROUNDED OUTLET COULD CAUSE SERIOUS BODILY INJURY OR DAMAGE TO THE PRODUCT.

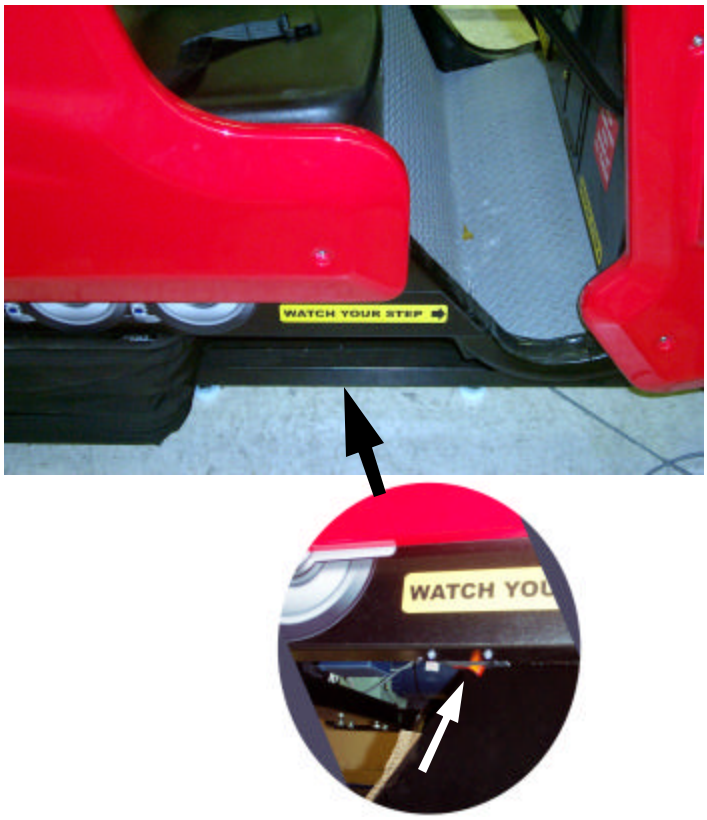
FAILURE TO USE A PROPERLY GROUNDED OUTLET COULD VOID YOUR WARRANTY.

WARNING: BE SURE POWER IS OFF ON THE COASTER BEFORE PLUGGING IN.

BE SURE NO ONE IS INSIDE THE COASTER FENCE AREA BEFORE PLUGGING THE COASTER IN.

THE ON/OFF SWITCH IS LOCATED UNDER THE COASTER NEAR THE RIGHT SIDE ENTRANCE TO THE COASTER AS ILLUSTRATED.

Turn the power to the game on.



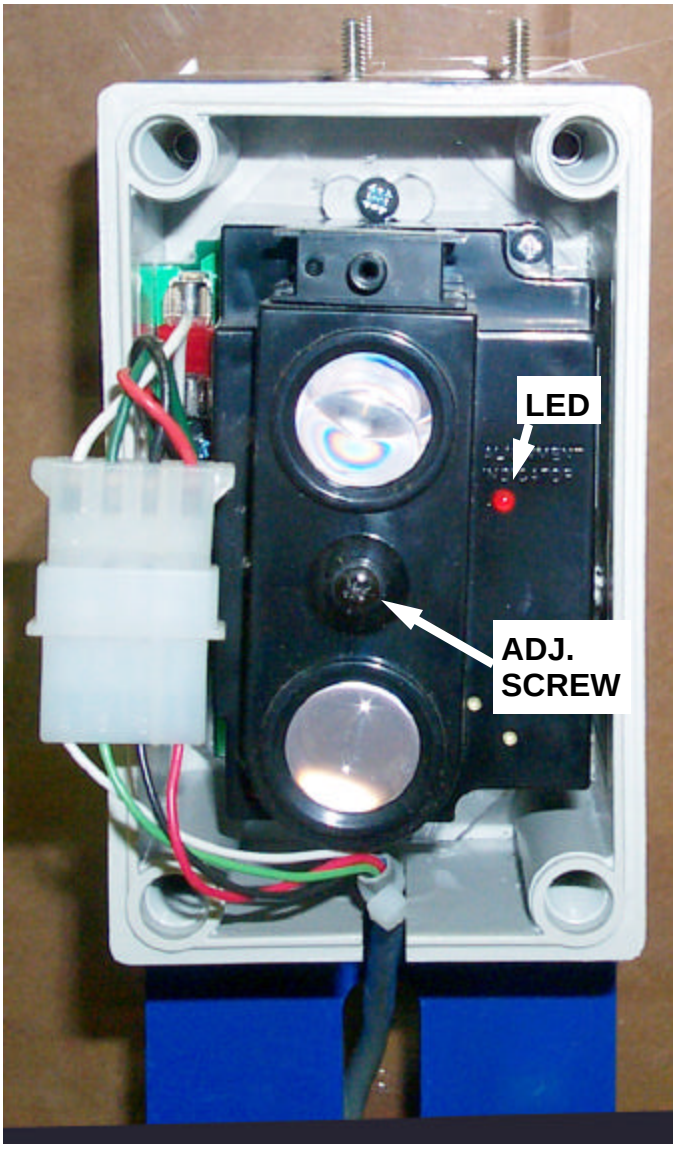
SET-UP AND ASSEMBLY

SENSOR ADJUSTMENT

When you first turn the power to the coaster on, the coaster may or may not have motion. This is because the safety sensors need to be aligned properly for the coaster motion to work.

1. BE SURE THE SENSORS ARE MOUNTED CORRECTLY. Check to see that the sensor mounting brackets are mounted vertically. If they lean forwards or backwards too far, proper sensor alignment might not be possible. If the brackets are not straight, bend the bracket by hand until it appears to be straight up and down.

2. SENSOR ALIGNMENT - there is a small red pilot LED on the sensor that will light when the sensor is properly aligned. The lenses on the sensor will rotate to allow for adjustment. There is a screw between the 2 eyes on the sensor that secures the eyes in place. Slightly loosen this screw and move the sensor around until the light comes on steadily.



BE SURE YOU'RE NOT STANDING IN FRONT OF THE SENSOR OR IT WON'T WORK.

3. Once you think you have the sensor aligned properly, wiggle the sensor and reflector brackets slightly to be sure you have the alignment in the "sweet spot".

4. Once all 4 of the sensors are aligned properly, coaster motion will function properly as long as nothing is blocking the sensors.

NOTE: DIRECT BRIGHT SUNLIGHT CAN AFFECT THE PROPER OPERATION OF THE SAFETY SENSORS. WE RECOMMEND THAT DIRECT SUNLIGHT IS AVOIDED IF POSSIBLE.

5. Install the sensor covers and check to make sure that the pilot LED's are still lit. If you block the sensors with your hand, the LED should go out and then come back on as soon as your hand is removed from the path of the beam.

6. Re-test the sensors by starting a coaster ride. Once the ride starts, carefully block each sensor one at a time. You should notice that the coaster will stop moving immediately, and will resume motion 5 seconds after beam interruption stops. If the coaster does not work this way, please call our service department for assistance.

WARNING: DO NOT OPERATE THE COASTER IF THE SAFETY SENSORS DO NOT WORK PROPERLY. IMPROPERLY WORKING SENSORS COULD CAUSE SERIOUS INJURY.

THE SYSTEM HAS BEEN DESIGNED TO SHUT THE COASTER DOWN BY DEFAULT IF A SENSOR PROBLEM IS DETECTED.

DO NOT TRY TO DEFEAT THE SENSOR SYSTEM IN THE EVENT OF A FAILURE. SERIOUS INJURY COULD RESULT.

FOR INFORMATION ON PROGRAMMING YOUR COASTER, SEE THE "PROGRAMMING" SECTION.

IF YOU HAVE ANY QUESTIONS OR COMMENTS REGARDING THE INSTALLATION OF THE COASTER, PLEASE CONTACT OUR SERVICE DEPARTMENT AT 1-716-759-0360

QUICK TROUBLESHOOTING

COASTER DOES NOT TAKE OR ADD MONEY CORRECTLY

BAD COIN SWITCH - REPLACE COIN SWITCH
BAD COIN SWITCH HARNESSING - REPAIR OR REPLACE HARNESSING
BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD
GAME PROGRAMMING SET UP INCORRECTLY - CHECK PROGRAMMING AND ADJUST IF NECESSARY
BAD OR INCORRECTLY PROGRAMMED BILL VALIDATOR - CHECK PROGRAMMING OR REPLACE

SELECT OR EMERGENCY STOP SWITCHES DO NOT WORK PROPERLY

BAD MICRO SWITCH OR HARNESSING - REPLACE SWITCH OR HARNESSING
BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD
SWITCH ASSEMBLY POPPED OUT OF BUTTON HOUSING - SNAP BACK INTO HOUSING

SELECT OR EMERGENCY STOP SWITCHES DO NOT LIGHT OR FLASH

BAD LIGHT BULB - REPLACE BULB
BAD BUTTON HARNESS - REPAIR OR REPLACE BUTTON HARNESS
BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD

COASTER DOES NOT MOVE AT ALL

BAD MAIN FUSE OR NO A.C. POWER - CHECK FOR POWER AND GOOD FUSE
BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD
BAD MOTOR DRIVER P.C. BOARD - REPLACE MOTOR DRIVER P.C. BOARD
BAD MOTOR - REPLACE MOTOR
BAD OR MISALIGNED SAFETY SENSOR - ALIGN OR REPLACE SAFETY SENSOR
BAD OR DISCONNECTED SAFETY SENSOR HARNESSING - CHECK HARNESSING
BAD HOME SENSOR - CHECK AND REPLACE HOME SENSOR IF NECESSARY
BAD ON / OFF SWITCH - REPLACE ON / OFF SWITCH

COASTER MOVES IMPROPERLY

BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD
BAD MOTOR DRIVER P.C. BOARD - REPLACE MOTOR DRIVER P.C. BOARD
BAD MOTOR - REPLACE MOTOR
BAD POSITION ENCODER SENSOR - CHECK FOR PROPER ALIGNMENT OR REPLACE SENSOR

TURNSTILE DOES NOT LOCK DURING THE RIDE

SHOULD ONLY LOCK GOING IN - NOT LOCKING GOING OUT OF THE RIDE IS NORMAL
TURNSTILE SOLENOID BAD - REPLACE SOLENOID
TURNSTILE HARNESSING BAD OR DISCONNECTED - CHECK HARNESSING FOR PROPER FUNCTION

QUICK TROUBLESHOOTING

COASTER SOUND LOW OR SOME SOUND MISSING

NO TRACK OR MUSIC SOUNDS - EACH SOUND ON A DIFFERENT CHANNEL. MAKE SURE BOTH ARE ON.
POWER AMP BAD OR DISCONNECTED - CHECK OR REPLACE POWER AMP
SPEAKERS OR HARNESSING BAD - CHECK OR REPLACE SPEAKERS
MEMORY CARD BAD - CHECK OR REPLACE MEMORY CARD

COASTER DOES NOT LEVEL AT END OF RIDE

BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD
BAD MOTOR DRIVER P.C. BOARD - REPLACE MOTOR DRIVER P.C. BOARD
BAD MOTOR - REPLACE MOTOR
BAD HOME SENSOR - CHECK AND REPLACE HOME SENSOR IF NECESSARY
BAD GEARBOX - REPLACE GEARBOX

NO VIDEO OR POOR QUALITY PICTURE

NO POWER TO PROJECTOR - CHECK POWER CORD AND BE SURE ON/OFF SWITCH IS SET TO "ON"
VIDEO CABLE BAD OR NOT FULLY PLUGGED IN - CHECK OR REPLACE VIDEO CABLE AS NECESSARY
PROJECTOR BULB BURNED OUT - REPLACE BULB AS DESCRIBED IN OWNERS MANUAL
PROJECTOR BULB OLD AND WORN OUT - REPLACE BULB AS DESCRIBED IN OWNERS MANUAL
PICTURE OUT OF FOCUS - RE-ADJUST FOCUS ON PROJECTOR
PICTURE NOT CORRECT SIZE - ADJUST ZOOM ON PROJECTOR
PICTURE NOT CENTERED - CORRECT BY ADJUSTING MOUNTING SHELF OR MOUNTING BRACKET
PICTURE NOT SQUARE - ADJUST KEYSTONE ADJUSTMENT AS DESCRIBED IN OWNERS MANUAL
BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
PROJECTOR SCREENS OR MIRRORS EXCESSIVELY DIRTY - DISASSEMBLE SCREENS AND CLEAN
MIRROR BROKEN THROUGH ACCIDENT OR ABUSE - REPLACE MIRROR
PROJECTOR NOT TURNED OFF LONG ENOUGH - TURN OFF FOR AT LEAST 1 MIN., THEN RESTART

AIR BLOWERS DO NOT WORK PROPERLY

BAD MAIN P.C. BOARD - REPAIR OR REPLACE MAIN P.C. BOARD
BAD BACKPLANE BOARD - REPAIR OR REPLACE BACKPLANE BOARD
BAD BLOWER MOTOR - REPLACE BLOWER MOTOR
BAD BLOWER MOTOR RELAY - CHECK AND REPLACE RELAY IF NECESSARY
BAD BLOWER MOTOR HARNESSING - CHECK AND REPAIR IF NECESSARY

DETAILED REPAIR

WARNING: ALWAYS REMOVE POWER TO THE COASTER BEFORE ATTEMPTING ANY SERVICE, UNLESS NEEDED FOR SPECIFIC TESTING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS.

TROUBLESHOOTING PHILOSOPHY

To find problems with the coaster, always first check what should be obvious. See that the coaster is plugged in and that all of the fuses on the coaster are good. This includes the fuse that is located INSIDE the power module.

Next, check to see that all of the connectors are firmly seated and that none of the wires have pulled out of them.

When trying to find out if specific components are bad or not, try swapping them with components from another player station to see if the problem moves with the component, or stays where it was. This will help you to know if you have a problem with a specific component, or maybe a problem with either the wiring or the Main P.C. Board.

Use extreme caution when using probes or voltmeters if the game is powered up. If doing continuity checks, it is important to disconnect the harnessing at both, as attached they may yield erroneous results.

If P.C. Boards are suspected as causing problems, check to see that all of the I.C. chips are firmly seated on the boards.

If light bulbs are suspected, swap them with one that is known to work to narrow the problem down to the bulb or P.C. Board.

MECHANICAL REPAIR

MOTOR / GEARBOX REPLACEMENT

MOTOR REPLACEMENT

NOTE: ALL POWER CORDS MUST BE REMOVED FROM THE A.C. OUTLETS BEFORE PERFORMING THIS REPAIR. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

1. The motors can be removed and replaced without removing the gearboxes.

2. Remove the nuts that secure the bellows to the top of the frame and lower the bellows. The bellows does not have to be removed from the game.

3. Unplug the motor encoder sensor and motor power connector from the harness.

4. Remove the bolts that hold the motor to the gearbox assembly, and remove the motor.

5. Remove the sensor bracket and encoder wheel and install onto the new motor.

6. Install the new motor onto the gearbox.

NOTE: WHEN ORIENTING THE MOTOR TO THE GEARBOX, BE SURE THAT THE WIRING BOX ON THE MOTOR FACES STRAIGHT DOWN.

7. Re-install the lock washers and bolts and Torque to 55 ft-lb.

8. Re-connect the encoder sensor to the harness.

9. Re-test for proper operation.

10. Re-connect the bellows.

DETAILED REPAIR

GEARBOX REPLACEMENT

NOTE: ALL POWER CORDS MUST BE REMOVED FROM THE A.C. OUTLETS BEFORE PERFORMING THIS REPAIR. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

1. Remove rear cover from game by removing the 2 Allen bolts that secure it to the frame.

2. Remove the nuts that secure the bellows to the top of the frame and lower the bellows. The bellows does not have to be removed from the game.

3. Remove the Main control electronics box or power supply depending on which gearbox needs replacement, to access the gearbox mounting bolts.

4.Unplug the motor encoder sensor and motor power connector from the harness.

5. Remove the bolts that hold the motor to the gearbox assembly, and remove the motor.

6. Remove the arm sensors and mounting brackets from the bottom of the transformer mounting pan.

7. Remove the transformer harnessing and remove the transformer mounting pan from the bottom of the gearboxes.

8. Remove the pinch bolt and safety bolt that connect the drive arm to the gearbox shaft.

NOTE: WHEN THE SWING ARM IS REMOVED, THE COASTER WILL FALL FORWARD. GET SOMEONE TO HELP YOU TO MAKE SURE THE COASTER DOES NOT MOVE TOO QUICKLY. THE COASTER IS VERY WELL BALANCED, SO IT SHOULD BE EASY TO SET IT FORWARD.

9. Carefully remove the bolts that hold the gearbox to the frame of the coaster.

10. Remove the gearbox from the coaster.

11. Install the new gearbox into the coaster. BE SURE TO USE THREAD LOCKING COMPOUND ON ALL BOLTS. Torque the gearbox mounting bolts to 55 ft-lb.

12. Re-install the swing arm. Torque the swing arm pinch bolt to 55 ft-lb. Torque the retaining bolt on the end of the gearbox shaft to 55 ft-lb.

13. Re-install the transformer mounting plate and Torque the bolts to 55 ft-lb. The swing arm sensor mounting brackets get re-attached under the mounting bolts.

NOTE: THE END OF THE OPTO SENSOR SHOULD BE 1/8" TO 3/8" (1/4" OPTIMAL) FROM THE REFLECTIVE FOIL ON THE SWING ARM TO WORK PROPERLY.

14. Re-connect the sensor and transformer wiring.

15. Install the motor onto the gearbox.

NOTE: WHEN ORIENTING THE MOTOR TO THE GEARBOX, BE SURE THAT THE WIRING BOX ON THE MOTOR FACES STRAIGHT DOWN.

16. Re-install the lock washers and bolts and Torque to 55 ft-lb.

17. Re-connect the encoder sensor to the harness.

18. Re-install the Power Supply or electronics (whichever you removed to access the gearbox).

19. Test for proper operation.

20. Re-install the bellows.

DETAILED REPAIR

SEAT REPLACEMENT

NOTE: ALL POWER CORDS MUST BE REMOVED FROM THE A.C. OUTLETS BEFORE PERFORMING THIS REPAIR. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

1. Remove the nuts that secure the bellows to the top of the frame and lower the bellows. The bellows does not have to be removed from the game.

2. Unplug the speaker harnessing from the seat.

3. Unbolt the seat retaining screws from under the coaster.

4. Assemble in reverse order.

PROJECTOR SCREEN REPLACEMENT

There are 3 screen elements that make up the projector screen.

Fresnel Lens - This lens re- directs the light beams into a direction that is most advantageous for viewing. this lens is mounted furthest to the inside with the smooth side facing out, or away from the projector.

Diffuser Lens - This lens is used to reduce the hotspots that would normally be visible if the diffuser were not used. This is the "screen" very similar to that of a movie screen, except this is used for back rather than front lighting. This lens sits between the Fresnel lens and Cover. it has no front or back orientation.

Cover - This is a clear Scratch resistant plastic material that is used to protect the inner screens. This can be replaced without removing the other screens.

1. Remove the screws that secure the side retainer brackets.

2. Remove the screws that secure the top retainer bracket.

3. Remove the lenses as needed.

BLOWER FAN REPLACEMENT

1. Remove the projector screen as indicated in the "Projector Screen replacement" section.

2. Unplug the faulty blower fan and unbolt from the coaster.

3. Re-assemble in reverse order.

BELLOWS REPLACEMENT

NOTE: ALL POWER CORDS MUST BE REMOVED FROM THE A.C. OUTLETS BEFORE PERFORMING THIS REPAIR. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

1. Remove the hardware that attaches the top of the bellows to the coaster frame.

2. Unzip the bellows to remove from the coaster. the zipper is located on the side of the bellows facing the front.

3. Re-assemble in reverse order.

4. Replace the adhesive Velcro strips on the base of the coaster if necessary.

ELECTRONICS / ELECTRICAL REPAIR

PROJECTOR SERVICING AND REPLACEMENT

The projector used is a very reliable DLP system that requires very little service. The advantages of this system over the traditional monitors are many. The only necessary maintenance on this monitor is bulb replacement. The average life of the bulb is around 4000 hours. this averages out to around 1 year based on 11 hours of use per day.

DETAILED REPAIR

PROJECTOR REMOVAL

1. Remove the 3 security Allen head screws that secure the front access door.

2. Tilt the door down for access to the Projector.

3. Remove the 4 self locking nuts that secure the projector mounting bracket to the shelf.

4. Remove the projector from the mounting bracket by removing the 3 screws that hold it in place. DO NOT LOSE THE PLASTIC SPACERS.

PROJECTOR BULB REPLACEMENT

WARNING: WHEN CHANGING THE PROJECTOR BULB, ALLOW SUFFICIENT TIME TO COOL. THE BULB IS EXTREMELY HOT.

WHEN OPENING THE PROJECTOR TO CHANGE THE BULB, BE VERY CAREFUL IN CASE THE BULB HAS BROKEN.

5. Replace the bulb as per manufacturers directions provided in the projector owners manual.

PROJECTOR INSTALLATION ADJUSTMENT & ALIGNMENT

1. Mount projector to the projector mounting bracket.

2. Use the spacers provided to mount to the bracket. DO NOT OVER TIGHTEN THE SCREWS.

3. Mount the projector to the mounting shelf in the coaster. LEAVE THE MOUNTING NUTS LOOSE AT THIS TIME.

4. Re-connect the power and video cable. the video cable uses the YELLOW INPUT.

5. Turn the projector on and wait until the picture becomes visible.

6. Once the picture becomes visible, rotate the mounting bracket left or right until the picture is centered on the screen.

7. Adjust the focus and zoom to fully fill the screen with the picture.

8. Once you are satisfied that the picture is the proper size and fits the screen properly, tighten down the mounting bracket nuts.

NOTE" IF YOU NEED TO MAKE ANY OTHER ADJUSTMENTS TO THE MONITOR, REFER TO THE PROJECTOR OWNERS MANUAL.

MAIN P.C. BOARD, DRIVER BOARD, AND FLASH CARD REPLACEMENT

1. Remove all A.C. power to the coaster.

2. Remove the rear access cover to the coaster.

3. Remove the cover from the electronics box.

4. Slide out and replace the appropriate card.

PARTS LISTING

MECHANICAL PARTS

CL1060	U JOINT
CL1066	TIE ROD END
CL1088-P500	REFLECTOR BRACKET
CL1087-P500	MOTION SENSOR BRACKET
CL1090-P500	FENCE, ENTRANCE SECTION
CL1091-P500	FENCE, SECTION 2
CL1092-P500	FENCE, SECTION 3
CL1093-P500	FENCE, SECTION 4
CL1094-P500	FENCE, SECTION 5
CL1095-P500	FENCE, SECTION 6
CL1096-P500	FENCE, SECTION 7
CL1097-P500	FENCE, SECTION 8
CL1210-P802	TURNSTILE COVER PLATE
CL1211	TURNSTILE MOUNTING PLATE
CL1212-P903	TURNSTILE BASE PLATE
CL1213	SELECTOR ARM
CL1214	LOCKOUT COIL ARM
CL1218	LOCKOUT GEAR, YOKE
CL1220	LOCK KEY, YOKE
CL1221	YOKE MOUNTING BRACKET
CL1222	YOKE
CL3001	SEAT
CL3010	REAR FENDER, LEFT SIDE
CL3011	REAR FENDER, RIGHT SIDE
CL3022	FRONT FENDER, LEFT SIDE
CL3023	FRONT FENDER, RIGHT SIDE
CL4001	BELLOWS
CL4002X	FLOOR MAT W/ADHESIVE

DECALS AND GRAPHICS

CL7001	CABINET LEFT SIDE DECAL
CL7002	CABINET RIGHT SIDE DECAL
CL7003	LEFT WHEEL DECAL
CL7004	RIGHT WHEEL DECAL
CL7005	STOP BUTTON DECAL
CL7006	REAR RIDE LOGO DECAL
CL7007	REAR LOGO DECAL
CL7008	SEAT DECAL
CL7009	THUNDERBOLT SELECT DECAL
CL7010	REAR LOWER DECAL
CL7011	PHOENIX SELECT DECAL
CL7012	CONTROL PANEL DECAL
CL7014	PHANTOM SELECT DECAL
CL7015	LEFT GRILL DECAL
CL7016	RIGHT GRILL DECAL
CL7017	WATCH YOUR STEP DECAL
CL7018	KEEP YOUR ARMS INSIDE DECAL
CL7019	TOP WARNING DECAL
CL7027	MARQUEE GRAPHICS PANEL

ADDITIONAL PARTS AND INFORMATION CAN BE OBTAINED BY CONTACTING OUR SERVICE DEPARTMENT AT **716-759-0360**

ELECTRONICS

CL2002	TRANSFORMER
CL2008	MOTOR, LEESON DRIVE
CL2008A	GEARBOX, LEFT HAND DRIVE
CL2008B	GEARBOX, RIGHT HAND DRIVE
CL2009	AMPLIFIER, HIGH POWER THUMP
CL2014	VIDEO PROJECTOR
CL2020	MOTION SENSOR
CL2027	BLOWER FAN
CL2039X	HOME SENSOR
CL2040X	BACKPLANE P.C. BOARD ASSY.
CL2041X	MAIN CONTROLLER BOARD
CL2042X	FLASH MEMORY CARD
CL2043X	MOTOR CONTROLLER BOARD

WARRANTY

ICE Inc warrants that all of its products will be free from defects in material and workmanship.

When placing a warranty request, please be prepared to provide the following information:

- Serial Number of Game or Bill of Sale
- Machine Type
- A Detailed Description of the Equipment Fault Symptoms

ICE product, including Cromptons, Sam's Billiards, Uniana and Bell Fruit is warranted as follows:

- 180 days on the Main PCB and Computers
- 90 days on all other components (i.e. DBV's, Ticket Dispensers, etc)
- 30 days on repaired items
- 3 years on all Crane Harnessing
- 9 Months on Printers

ICE Inc shall not be obligated to furnish a warranty request under the following conditions:

- Equipment has been subjected to unwarranted stress through abuse or neglect
- Equipment has been damaged as a result of arbitrary repair/modification attempts
- Equipment that has failed through normal wear and tear

ICE Inc will assume no liability whatsoever for costs associated with labor to replace defective parts or travel time associated therein.

All defective warranty covered components will be replaced with new or factory refurbished components equal to OEM specifications. ICE Inc will cover all UPS ground, or comparable shipping means, freight costs during the warranty period. Expedited shipments are available for an additional charge.

Defective parts are returned to ICE Inc, at the customer's expense, in a timely fashion.

ICE distributors are independent, privately owned and operated. In their judgment, they may sell parts and/or accessories other than those manufactured by ICE Inc. We cannot be responsible for the quality, suitability or safety of any non-ICE part, modification (including labor) that is performed by such a distributor.

I.C.E. Parts/Service Dept.
Innovative Concepts in Entertainment
10123 Main St.
Clarence, NY 14031
Phone #: (716) - 759 – 0360
Fax #: (716) – 759 – 0884

Warranty

I.C.E warrants all components in the **THRILL RIDER**™ game to be free of defects in materials and workmanship for a period of 90 days from the date of purchase. Furthermore, all MAIN P.C. BOARDS are warranted for 180 days.

This warranty does not cover items damaged due to normal wear and tear, subjected to abuse, improperly assembled by the end user, modified, repaired, or operated in a fashion other than that described in the service manual.

If your **THRILL RIDER**™ game fails to conform to the above-mentioned warranty, I.C.E.'s sole responsibility shall be at its discretion to repair or replace any defective component with a new or remanufactured component of equal to or greater O.E.M. specification.

I.C.E. will assume no liability whatsoever, for costs associated with labor to replace defective parts, or travel time associated therein.

I.C.E.'s obligation will be to ship free of charge, replacement parts by U.P.S. Ground, U.S. mail, or other comparable shipping means. Any express mail or overnight shipping expense is at the cost of the purchaser.

Products will be covered under warranty only when:

- The serial number of the game with the defective parts is given.
- The serial number of the defective part, if applicable, is given.
- Defective parts are returned to I.C.E., shipping pre-paid, in a timely fashion, if requested by I.C.E.
- A copy of the sales receipt is available as proof of purchase upon request of I.C.E.

I.C.E. distributors are independent, privately owned and operated. In their judgment, they may sell parts or accessories other than those manufactured by I.C.E. We cannot be responsible for the quality, suitability, or safety of any non-I.C.E. part, or any modification, including labor, which is performed by such a distributor.